

We claim:

1. A method for producing tetrahydroborates by using borates as chemical raw material, comprising:
 - reacting a mixture containing borate and alkali earth metal by heating
5 in a hydrogen atmosphere under pressure below a reaction equilibrium pressure where hydride of the alkali earth metal exists in stable.
2. The method for producing tetrahydroborates as set forth in claim 1 wherein the alkali earth metal is magnesium.
3. The method for producing tetrahydroborates as set forth in claim 1
10 wherein the mixture contains hydrogenating catalyst to adsorb hydrogen.
4. The method for producing tetrahydroborates as set forth in claim 1 wherein the mixture is in form of fine powder.
5. The method for producing tetrahydroborates as set forth in claim 4
15 wherein the borate and the alkali earth metal respectively is pulverized of an average particle diameter of maximum 100 μ m.
6. The method for producing tetrahydroborates as set forth in claim 5 wherein the average particle diameters of both borate and alkali earth metal are generally the same.
7. The method for producing tetrahydroborates as set forth in claim 1
20 wherein coke oven gas is used as a source of hydrogen.
8. The method for producing tetrahydroborates as set forth in claim 1 wherein the mixture is provided with hydrogen atmosphere at temperature of maximum 450°C and heated to temperature of 500 to 650°C.
9. The method for producing tetrahydroborates as set forth in claim 1
25 wherein the tetrahydroborate produced is or include any one of a group consisting of sodium borohydride (NaBH_4), lithium borohydride (LiBH_4) and potassium borohydride (KBH_4).